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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/621,403 | 07/18/2003 | Min Jang | K-0526 | 2816 |

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EXAMINER

DOAN, PHUOC HUU

ART UNIT PAPER NUMBER

2687

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/621,403 | JANG, MIN | |
| | Examiner | Art Unit | |
| | PHUOC H DOAN | 2687 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☒ Claim(s) 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 July 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings were received on 07/18/03. These drawings are acceptable.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims **1-2, 4-5, 7-19, 21-23, 25-29, and 31-32** are rejected under 35 U.S.C. 102(e) as being anticipated by **Hogan (US Pub No: 2003/0040314)**.

As to claim 1, Hogan discloses a method comprising limiting at least one service “**location area access restriction**” to a radio device according to a location of the radio device (col. 3 through col. 4, par. [0032-0034]).

As to claim 2, Hogan further discloses the method of claim 1, wherein the radio device is a mobile station (col. 1, par. [0002]).

As to claim 4, Hogan further discloses the method of claim 1, wherein the method is implemented in a mobile communication exchange (col. 4, par. [0038], col. 5, par. [0041-0042]).

As to claim 5, Hogan further discloses the method of claim 4, wherein the mobile communication exchange comprises at least one of a packet exchange and a circuit exchange (col. 4, par. [0038], col. 5, par. [0041-0042]).

As to claim 7, Hogan further discloses the method of claim 4, wherein: the mobile communication exchange is coupled to a home location register ("**in handling mobile terminal registrations**" col. 2, par. [0009-0010]); the mobile communication exchange is coupled to a universal terrestrial radio network (col. 4, par. [0039]); and the mobile communication exchange is coupled to one of a public switched telephone network and an Internet protocol network ("**internet provided by IP connectivity**" col. 4, par. [0038-0039]).

As to claim 8, Hogan further discloses the method of claim 7, wherein the mobile communication exchange is coupled to the Internet protocol network through a gateway GPRS support node (col. 4, par. [0038]).

As to claim 9, Hogan further discloses the method of claim 1, comprising comparing the location of the radio device with a register (col. 5, par. [0045]), wherein the register comprises at least one predetermined relationship between location of the radio device and limitations on at least one service to the radio device (col. 5, par. [0045]).

As to claim 10, Hogan further discloses the method of claim 9, wherein said limiting at least one service to a radio device according to the location of the radio device is in accordance with said at least one predetermined relationship comprised in the register (col. 4, par. [0034-0036]).

As to claim 11, Hogan further discloses the method of claim 9, wherein the register is a home location register (col. 2, par. [0009-0010]).

As to claim 12, Hogan further discloses the method of claim 1, wherein the location of the radio device is represented by at least one of: a location area identifier (col. 2, par. [0015]; a service area identifier; and a routing area identifier (also see col. 5, par. [0042]).

As to claim 13, Hogan further discloses the method of claim 12, wherein: the location area identifier and the service area identifier are used for circuit service (col. 2, par. [0015, and col. 4, par. [0038]); and the routing area identifier and the service area identifier are used for packet service (col. 4, par. [0038], and col. 5, par. [0045]).

As to claim 14, Hogan further discloses the method of claim 1, wherein prior to said limiting at least one service to the radio device (col. 3, par. [0032]), comprising: detecting a handover of the radio device to a new location (col. 4, par. [0033], and [0040]); and prior completing the handover to the new location (col. 4, par. [0034], informing a user of the radio device that at least one service to the radio device will be limited once the handover is complete (Detail col. 4, par. [0033-0036]).

As to claim 15, Hogan further discloses the method of claim 1, wherein said limiting is in accordance with a request from a user of the radio device to limit at least one service to the radio device according to the location of the radio device (col. 4, par. [0033-0034], and col. 5, par. [0044-0046]).

As to claim 16, Hogan further discloses an apparatus configured to implement the method of claim 1 (col. 5, par. [0041]).

As to claim 17, Hogan discloses an apparatus comprising (Fig. 7, par. [0041]): a home location register **"When the mobile terminal is powered-on and registered with the network, that mobile terminal have to registered with the HLR**, col. 5, par. [0043]" comprising predetermined relationships between limitations on subscriber services and location of a mobile station (col. 5, par. [0041-0043]); and a means for limiting a subscriber service to the mobile station according to the home location register (col. 5, par. [0044-0046]).

As to claim 18, Hogan discloses a service control method using subscriber's location information for a mobile communication system comprising the steps of (col. 5, par. [0042]): registering information on a service limit according to a subscriber's location in a service profile of the subscriber during a service change or subscription (col. 5, par. [0043]); and if a service request is received (col. 5, par. [0046]), limiting the service on the basis of the mobile terminal subscriber's location information using registered contents of the subscriber's service profile (col. 5, par. [0043-0047]).

As to claim 19, Hogan further discloses the service control method of claim 18, wherein the subscriber's location information for limiting the service is expressed by a location area identifier (LAI) (col. 2, par. [0015]), a routing area identifier (RAI) (col. 2, par. [0011]), and a service area identifier (SAI) (col. 2, par. [0012]).

As to claim 21, Hogan further discloses the service control method of claim 18, further comprising the step of, if the mobile communication subscriber initially connects to a mobile communication network after the information on the service limit according

to the subscriber's location is registered in the service profile of the subscriber (col. 1, par. [0007-0008]), transmitting the subscriber profile including service limit contents from a home location register to a mobile communication exchange to store the subscriber profile (col. 2, par. [0009-0012], and col. 5, par. [0044-0047]).

As to claim 22, Hogan further discloses the service control method of claim 18, further comprising, when the subscriber requests the service (col. 5, par. [0042]), the steps of: transmitting service contents and the location information to a mobile communication exchange (col. 5, par. [0043]); comparing the transmitted service and a service request location with the service profile of the subscriber (col. 5, par. [0045]); and if the service limit contents according to the service request area coincide with each other, informing the service limit contents to the mobile terminal subscriber, and rejecting the service (col. 5, par. [0046]).

As to claim 23, Hogan further discloses the service control method of claim 18, further comprising, if a handover made by movement of the mobile terminal into a service limit area is produced while the subscriber is receiving the service (col. 1, par. [0007]), the steps of: sensing the handover (col. 1, par. [0007-0008]); detecting a target location of the handover (col. 2, par. [0009-0012]); checking whether the target location corresponds to the service limit location (col. 2, par. [0012-0014]); if the target location corresponds to the service limit area, informing the service limit area (col. 3, par. [0016]; and if the handover is made into the service limit area col. 4, par. [0033-0034]), informing the area in which the service is limited, and releasing the service (col. 5, par. [0042-0043]).

As to claim 25, Hogan disclose a service control method using subscriber's location information for a mobile communication system provided with a mobile terminal (col. 5, par. [0041-0042]), a home location register (HLR), and a mobile communication exchange (col. 5, par. [0043]), the method comprising: a first step of registering a service limit according to the location information (col. 5, par. [0043]); a second step of extracting a kind of a service requested during a service request and a location of a subscriber (col. 5, par. [0044-0045]); and a third step of limiting the service if a present location of the subscriber is included in a limited location of the extracted service (col. 5, par. [0045-0047]).

As to claim 26, Hogan further discloses the service control method of claim 25, wherein the first step comprises the steps of: storing contents of the service limit according to the location information in the HLR (col. 2, par. [0012]); and if the subscriber's mobile terminal connects to a mobile communication network (col. 2, par. [0011]), the mobile communication exchange reading out a service limit profile according to the location information from the HLR (col. 4, par. [0033-0039]).

As to claim 27, this claim is rejected for the same reason as set forth in claim 25.

As to claim 28, Hogan further discloses the service control method of claim 25, wherein the third step comprises the steps of: the mobile communication exchange judging whether there is a location limit in the extracted service (col. 5, par. [0043]), and if it is judged that there is no location limit in the extracted service, normally processing the requested service (col. 5, par. [0045]); normally processing the requested service if

there is the location limit in the extracted service, but the present location of the subscriber is not included in the limited location (col. 5, par. [0045-0046]); and reporting the service limit area and refusing the service if the present location of the subscriber is included in the limited location of the extracted service (col. 5, par. [0045-0047]).

As to claim 29, this claim is rejected for the same reason as set forth in claim 19.

As to claim 31, Hogan further discloses the service control method of claim 25, wherein at the second step, the mobile terminal requests a service request message including variables required for the service (col. 5, par. [0041]), the kind of the service (col. 4, par. [0033]), and the location information to the mobile communication exchange during the service request (col. 5, par. [0046]).

As to claim 32, Hogan discloses a service control method using subscriber's location information for a mobile communication system provided with a mobile terminal (col. 5, par. [0041-0042]), a home location register (HLR), and a mobile communication exchange (col. 5, par. [0043]), the method comprising: a first step of registering a service limit according to the location information (col. 5, par. [0043]); a second step of detecting a handover target location of the subscriber who has registered the service limit according to the location information when the subscriber receives the service (col. 1, par. [0007-0008]); and a third step of releasing the service if a handover to the service limit area occurs (col. 1 through col. 2, par. [0007-0012]).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims **3, 6, 20, and 30** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hogan in view of **Vasa (US Patent No: 6,826,397)**.

As to claim 3, Hogan discloses the method of claim 1, wherein said at least one service comprises at least one of: a circuit originating call **"a destination cell can support a connection to a user equipment unit at the same time the origination cell continues to service the connection"** col. 1, par. [0005]; a circuit terminating call (col. 1, par. [0006-0007]); additional service (col. 1, par. [0003]); roaming service (col. 4, par. [0033]); a packet originating call (col. 4, par. [0038-0039]); and a packet terminating call (col. 4, par. [0038-0039]). However, Hogan does not specific disclose that originating short message service.

Vasa specific disclose that originating short message service (col. 3, lines 6-16, and col. 4, lines 15-30); terminating short message service (col. 3, lines 6-16, and col. 4, lines 15-30). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the short message service as taught by Vasa to the method of Hogan in order to have a short message service by originating or terminating service as provided by Vasa.

As to claim 6, Hogan discloses the method of claim 5, wherein: the packet exchange comprises a serving GPRS support node (col. 4, par. [0038]. However, Hogan does not specific disclose the circuit exchange comprises a mobile switching center and a visitor location register.

Vasa specific discloses the circuit exchange comprises a mobile switching center and a visitor location register (col. 3, lines 30-55). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide mobile switching center and a visitor location register as taught by Vasa to the method of Hogan in order to have a communication service by originating or terminating service as provided by Vasa.

As to claim 20, this claim is rejected for the same reason as set forth in claim 3.

As to claim 30, this claim is rejected for the same reason as set forth in claim 3.

6. Claim **33** is rejected under 35 U.S.C. 103(a) as being unpatentable over Hogan in view of **Rune (US Patent No: 6,212,390)**.

As to claim 33, Hogan discloses all the limitation in claim 1. However, Hogan does not specific disclose the service control method of claim 32, further comprising the step of reporting in advance the subscriber of the service limit area if the target location moves to the service limit location before the third step.

Rune specific discloses the service control method of claim 32, further comprising the step of reporting in advance the subscriber of the service limit area if the target location moves to the service limit location before the third step (col. 8, lines 19-

53). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the service limit area if the target location moves to the service limit location as taught by Rune to the service control method of Hogan in order to tracking the target would be allowed to access or not as provided by Rune.

Allowable Subject Matter

7. Claim **24** objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to claim 24, the prior art of record do not disclose the service control method of claim 18, further comprising, if the subscriber requests a change of service limit contents according to the subscriber's location, the steps of: receiving a request for the change of the service limit contents from the subscriber; **correcting the service profile of the subscriber according to contents of the request; and requesting the change by transmitting the corrected profile to a mobile communication exchange.**

Conclusion

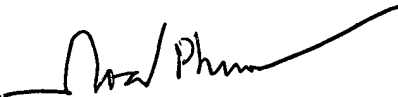
Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUOC H DOAN whose telephone number is 571-272-7920. The examiner can normally be reached on 9:30 AM - 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, LESTER G KINCAID can be reached on 571-272-7922. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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05/09/05


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